ASWR8150 SIGNAL CHASSIS UPGRADE PROCEDURE

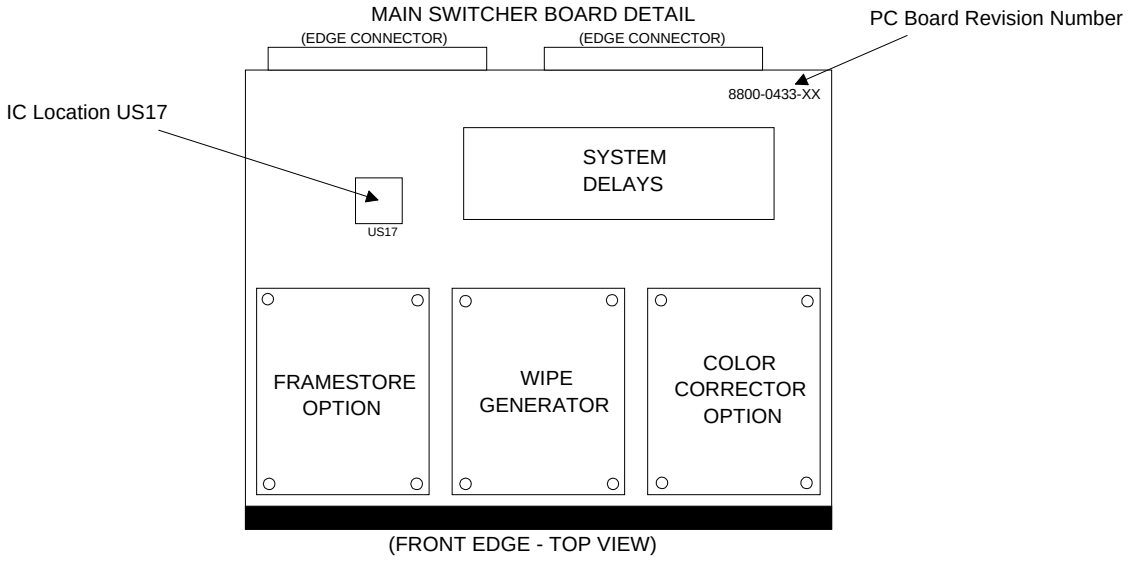
(PART NUMBER 9301-0111-00 REVISION F)

DISCUSSION: This document provides the instructions necessary to retrofit the ASWR8100 Signal Processor Chassis and Control Panel to accommodate and reflect the future addition of the ASWR8150 Twin Channel DVE Board and Turbo Module. The system will then be referred to as an ASWR8150. This upgrade kit **DOES NOT** provide any additional upgrade kits or options such as the ASWR8150 DVE Option, Hard Drive Option, or Frame Delay Output Option. These must be purchased separately at additional cost from ACCOM. For information on additional Options or Upgrade Kits, or to arrange Main board or Output/Tally board swaps, contact ACCOM CUSTOMER SERVICE at (650) 328-3818.

*** IMPORTANT - PLEASE READ ***

Certain revisions of ASWR8100 Main Switcher Boards will not function properly when the ASWR8150 DVE Option and Turbo Module are installed. It may be necessary to exchange your ASWR8100 Main Switcher Board through ACCOM CUSTOMER SERVICE at normal exchange rates. Check the following to determine if a Main Board exchange is necessary…

Observing proper static precautions, and using the 8100 Insertion/Extraction Tool, carefully remove the Main Switcher Board from the Signal Chassis. Locate the silkscreened PC Board Revision Number. See figure below.



*If your Main Switcher Board is silkscreened with a PC Board Revision Number ending with **–04**, no board exchange is necessary.

*If your Main board is silkscreened with a PC Board Revision number ending in **–02 or -01**, look at the IC at location **US17**. If US17 is labeled with 8700-5027-01 or 5027-01, no board exchange is necessary. If US17 is labeled with 8700-5027-00 or 5027-00, the board must be exchanged. Contact ACCOM CUSTOMER SERVICE.

CONTINUE

This procedure will be presented in the following sections:

SECTION I: ASWR8100 Signal Chassis Preparation
SECTION II: ASWR8150 Signal Chassis Configuration
SECTION III: ASWR8150 System Power Supply Alignment
SECTION IV: ASWR8150 Control Panel Configuration

WARNING: This procedure should be attempted only by qualified service personnel. All sections and steps of this procedure must be completed in the order presented. Failure to observe proper static precautions could seriously damage all components. Installation assistance may be obtained at standard Accom, Inc. Service Rates. If problems are encountered with this procedure, contact Accom Customer Service at (650) 328-3818. Allow four hours for installation and checkout of this procedure.

PARTS REQUIRED:	**9700-0171 ASWR8100 Signal Chassis Upgrade Kit to include:**	
3500-1193	Keycap, “EFFECTS TRANS”	1 EA
3500-1194	Keycap, “DVE”	1 EA
3500-1195	Keycap, “PATH PREVIEW”	1 EA
3500-1197	Keycap, “FREEZE”	1 EA
3500-1198	Keycap, “FIELD”	1 EA
3500-1199	Keycap, “CURSOR”	1 EA
1902-0094	Hardware, Cable Tie	2 EA
1200-0463	Hardware, Jumper	2 EA
8900-1113	Fabricated, ASWR8150 Facia Plate	1 EA
8901-0146	Label, ASWR8150 Chassis	1 EA
8901-0147	Label, ASWR8150 Control Panel	1 EA
8901-0148	Label, ASWR8150 Control Panel Overlay	1 EA
9100-0256	Document, ASWR8150 Technical Guide	1 EA
9100-0204	Document, ASWR8150 Switcher Operations Manual	1 EA
9301-0111	Document, ASWR8100 Signal Chassis Upgrade	1 EA
9500-0241	Assembly, ASWR8150 Power Supply Tray	1 EA
9500-0247	Assembly, ASWR8150 Chassis Fan Assembly	2 EA

PARTS RETURNED:	**The following components are returned to Accom, Inc.:**		
2800-0054	Assembly, ASWR8100 Power Supply Tray		1 EA
9400-0634-02 or -01	Assembly,ASWR8150	Main Switcher Board	**As Required**

TOOLS REQUIRED: The following hand tools will be required to perform this upgrade:

8100 Insertion/Extraction Tool	Slip-Joint Pliers
Miniature Trimmer Tool	Diagonal Cutters
#1 Phillips Screwdriver	Needlenose Pliers
#2 Phillips Screwdriver	Exacto$_{TM}$ Knife
#1 Flat Blade Screwdriver	Digital Voltmeter/Leads

CONTINUE WITH SECTION I

SECTION I: ASWR8100 SIGNAL CHASSIS PREPARATION PROCEDURE

___I.1: Remove system power. Remove all cable connections from the rear of the ASWR8100 Signal Chassis, and remove the Signal Chassis front panel. Remove the Signal Chassis from the equipment enclosure, and place on a flat work surface, allowing access from all directions.

___I.2: Remove the six (6) M3X6 phillips screws along the top edge of the left and right Signal Chassis side panels. These screws are securing the top cover plate to the chassis side panels.

___I.3: Remove the remaining nine (9) M3X6 phillips screws securing the cover plate to the Signal Chassis cross braces. Remove the cover plate and set aside.

___I.4: Observing proper static precautions, and using the 8100 Insertion/Extraction Tool, carefully remove the Main Switcher Board from the Signal Chassis, and set aside in a static safe area.

___I.5: Observing proper static precautions, remove all M3X6 phillips screws securing the Video Input Modules to the Signal Chassis. Remove all Video Input Modules from the signal chassis and set aside in a static safe area.

___I.6: Remove the four (4) M3X6 phillips screws securing the Output/Tally module to the Signal Chassis. Remove the Output/Tally Module from the Signal Chassis and set aside in a static safe area.

ASWR8100 SIGNAL CHASSIS PREPARATION COMPLETE: CONTINUE WITH SECTION II

SECTION II: ASWR8150 SIGNAL CHASSIS CONFIGURATION PROCEDURE

___II.1: The ASWR8100 Power Supply Tray connects to the backplane board by way of three (3) Molex$_{TM}$ connectors. Disconnect the following connectors at the backplane board:

Connector J16: **DC Power Harness**
Connector J17: **DC Power Harness**
Connector J20: **Battery Back-Up Power Fail**

___II.2: Disconnect the A/C power input to the Power Supply Tray. This is an "in-line" Molex$_{TM}$ connector containing one each BLUE, GREEN, and BROWN wires.

___II.3: From the front of the Signal Chassis, remove the two (2) M4X12 phillips flathead screws securing the 8100 Power Supply Tray to the lower lip of the chassis.

___II.4: Slide the Power Supply Tray towards the rear of the chassis, to disengage the rear locking tabs. Lift the entire Power Supply Tray from the Signal Chassis and set aside.

___II.5: Insert the ASWR8150 Power Supply Tray (9500-0241) into the Signal Processor Chassis. Set the Power Supply Tray into position; aligning the rear locking tabs to the chassis extrusions. Slide the Power Supply Tray forward to engage the locking tabs.

___II.6: Install the two (2) M4X12 phillips flathead screws securing the Power Supply Tray to the front of the Signal Chassis.

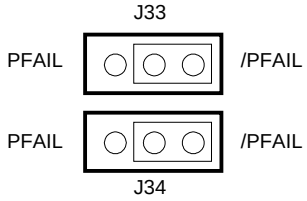
___II.7: Connect the A/C power input to the ASWR8150 Power Supply Tray. This is the "in-line" Molex$_{TM}$ connector containing the BLUE, GREEN, and BROWN wires.

___II.8: Connect the following connectors to the backplane board:

Connector J16: **DC Power Harness**
Connector J17: **DC Power Harness**
Connector J20: **Battery Back-Up Power Fail**

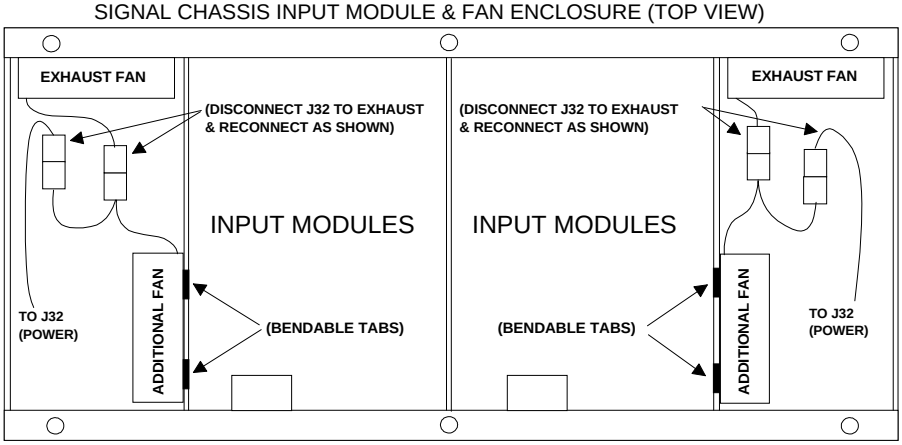
___II.9: Locate jumpers J33 and J34 on the left side of the backplane board. On some systems, J33 and J34 may be wire wrapped to the jumper posts. Other systems may have the removable jumpers previously installed. If necessary, use the diagonal cutter and needlenose pliers to carefully remove the wire wrap jumpers from J33 and J34.

___II.10: Using the supplied jumpers (1200-0463), or the factory installed jumpers, set J33 and J34 to the /PFAIL position, as shown in the figure below:



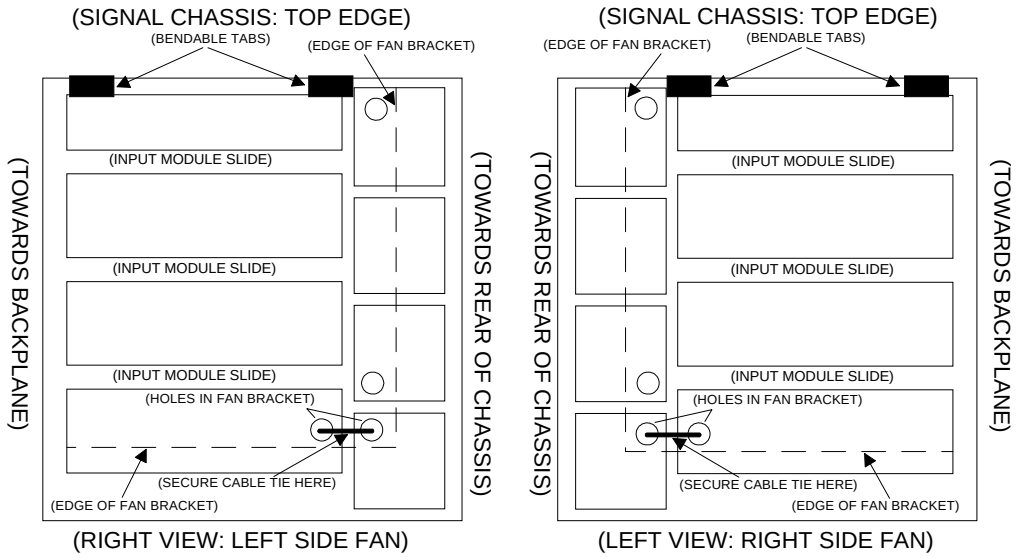
___II.11: To accommodate the future addition of the ASWR8150 DVE Board, it is necessary to install two (2) additional cooling fan assemblies. Locate and remove the two Chassis Fan Assembles (9500-0247-00) from the upgrade kit. Each Fan Assembly should have a bracket attached, which has two (2) bendable tabs and two (2) power connectors. The tabs will hook over the input module side rails, on each side of the chassis, directly behind the main exhaust fans and flush with the backplane. Refer to the following figure for the correct placement and connection of the additional fan assemblies:

SIGNAL CHASSIS INPUT MODULE & FAN ENCLOSURE (TOP VIEW)



(SWITCHER AND DVE BOARD ENCLOSURE)

___II.12: Using the flatblade screwdriver, carefully pry open the bendable tabs on the fan mounting bracket. Position the fan assemblies in the locations shown, hooking the tabs over the top of the Input Module side rails, and aligning the cable tie holes according to the figures below.
___II.13: The bottom of the fans will be secured to the Video Input Module side rails by threading a cable tie (1902-0094) through the holes in the bottom of the fan mounting brackets. Refer to the figures below for the location of the cable ties:



___II.14: On each of the added fan assemblies, thread a cable tie through the holes in the fan mounting bracket, and around the section of the Input Module side panel, as shown. Cinch the cable tie and trim the tail, securing the bottom of the fan assembly. Crimp the bendable tabs closed with the slip-joint pliers.
___II.15: Disconnect the Molex$_{TM}$ connectors, containing the twisted pair DC power cable from J32 to the EXHAUST fans. Connect the power cables from the EXHAUST fans to the FEMALE mating connector on the ADDITIONAL fans. Connect the twisted pair power cables from J32 to the MALE mating connectors on the ADDITIONAL fans. Refer to the previous figures.
___II.16: Reinstall all Video Input Modules in the proper Signal Chassis locations per system configuration. Secure each input module to the chassis using the required M3X6 phillips screws.
___II.17: Reinstall the Output/Tally Module into the Signal Processor Chassis and secure with four (4) M3X6 phillips screws.
___II.18: Remove the ASWR8150 Facia Plate (8900-0113-00) from the Upgrade Kit. Locate the ASWR8100 front panel, removed in STEP I.1. The facia plate is press fit to the main front panel assembly. Remove the ASWR8100 Facia Plate from the front panel, and discard.
___II.19: With only the Video Input and Serial Output/Tally Modules installed, apply power to the Signal Chassis and verify that all four fans are running. ***NOTE: Verify that airflow on the additional fan assemblies is towards the sides of the chassis, drawing air through the holes in the center of the backplane and across the Video Input Modules.***

WARNING: Additional fans must be placed in the exact locations indicated to prevent severe overheating and possible component damage. Failure to install ALL Video Input Modules or blank filler panels will disrupt airflow through the Signal Chassis resulting in severe overheating.

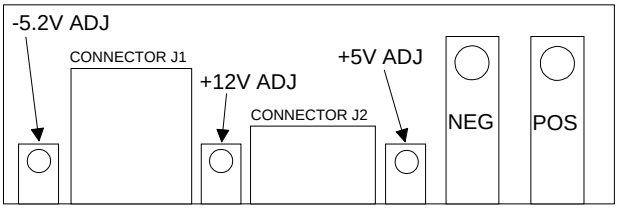
___II.20: Locate the chassis label (8901-0146) in the Upgrade Kit. This label contains the ASWR8150 input voltage specifications and current requirements.
___II.21: Remove the adhesive backing from the chassis label. From the rear of the Signal Chassis, locate the silkscreen below the left exhaust fan and above the 10AMP circuit breaker and AC input receptacle. This silkscreen states the standard ASWR8100 requirements. Install the upgrade label in the same location, covering the ASWR8100 silkscreen.

ASWR8150 CHASSIS CONFIGURATION COMPLETE: CONTINUE WITH SECTION III

SECTION III: SYSTEM POWER SUPPLY ALIGNMENT PROCEDURE

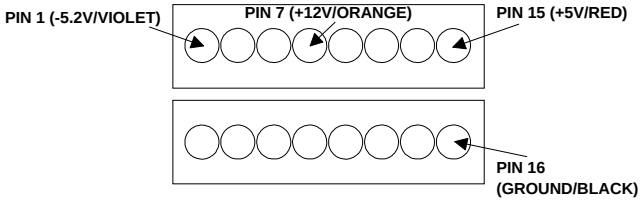
___III.1: Refer to the following figure. Observing the rear of the ASWR8150 Power Supply, locate the power supply adjustments:

SYSTEM POWER SUPPLY (REAR VIEW)



___III.2: All voltage measurements will be taken by inserting the Digital Voltmeter leads into the rear of backplane connector J17. The connector pins on J17, as viewed from the front of the Signal Processor Chassis are as follows:

J17 CONNECTOR PIN DETAIL

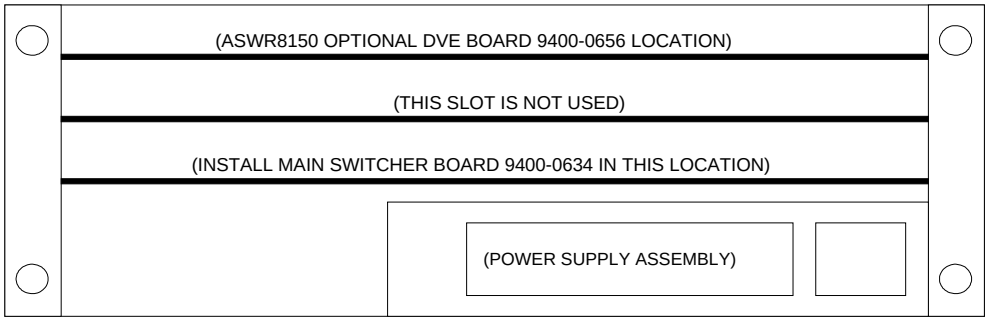


___III.3: Connect the DVM NEGATIVE (Ground) lead to J17-16. With the DVM POSITIVE lead, monitor the points indicated below and adjust to the EXACT specified levels:

DVM Positive Lead:	**Adjustment:**	**Adjust To Read:**
J17-15 (RED)	+5V ADJ	+5.20 VDC
J17-1 (VIOLET)	-5.2V ADJ	-5.20 VDC
J17-7 (ORANGE)	+12V ADJ	+12.00 VDC

___III.4: Remove power from the Signal Chassis. Set the Signal Chassis top cover plate in place and reinstall the twelve (12) M3X6 phillips screws, securing the cover plate to the chassis.
___III.5: Observing static precautions, reinstall the Main Switcher Board removed in STEP I.4 into the Signal Chassis in the location shown in the figure below:

(SIGNAL CHASSIS: FRONT VIEW/BOARD LOCATIONS)


(ASWR8150 OPTIONAL DVE BOARD 9400-0656 LOCATION)
(THIS SLOT IS NOT USED)
(INSTALL MAIN SWITCHER BOARD 9400-0634 IN THIS LOCATION)
(POWER SUPPLY ASSEMBLY)

___III.6: Install the Signal Processor Chassis in the previous equipment enclosure; restore all cable connections; install the ASWR8150 Front Panel and apply system power.

SYSTEM POWER SUPPLY ALIGNMENT COMPLETE: CONTINUE WITH SECTION IV

SECTION IV: ASWR8150 CONTROL PANEL CONFIGURATION PROCEDURE

___IV.1: Locate the six (6) Control Panel keycaps, and the two (2) Control Panel labels, in the Upgrade Kit. Refer to the following figure for the locations of the upgrade keycaps and labels:

WARNING: Carefully remove old keycaps with the slip-joint pliers, pulling straight out on the keycap. Excessive and oblique force may damage the switch.

___IV.2: Install the following keycaps in the Main Menu Group, as indicated in the figure:

EFFECTS TRANS	**(3500-1193)**
DVE	**(3500-1194)**

___IV.3: Install the following keycaps in the DVE/Timeline Group, directly below the Joystick, as indicated in the figure:

PATH PREVIEW	**(3500-1195)**
FREEZE	**(3500-1197)**
FIELD	**(3500-1198)**
CURSOR	**(3500-1199)**

___IV.4: Inserting the Exacto$_{TM}$ Knife under the “8100” label, carefully peel off the “8100” label and discard. Replace with the adhesive backed “8150” label (8901-0147-00).
___IV.5: Inserting the Exacto$_{TM}$ Knife under the opaque overlay, above the CURSOR and PATH PREVIEW buttons, carefully peel off the opaque overlay and discard. Replace with the adhesive backed DVE Channel Indicator overlay (8901-0148-00). Shine light through the overlay to determine the correct top/bottom orientation.

ASWR8150 CONTROL PANEL CONFIGURATION COMPLETE: READ ON

At this time, the ASWR8150 should be fully operational and ready to accept the ASWR8150 DVE Upgrade. The addition of any other ASWR8150 Upgrade Kits or Options may require additional modifications to be performed. Contact Accom Customer Service for information. Please pack the ASWR8100 Power Supply Tray in the anti-static packaging in which the ASWR8150 Power Supply Tray was shipped, and return the assembly to Accom, Inc. as soon as possible.

ASWR8150 SIGNAL CHASSIS UPGRADE PROCEDURE COMPLETE